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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,697	06/18/2001	Hiroshi Iizuka	P100158-00034	8595

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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,697

Applicant(s)

IIZUKA ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, it is unclear if the "space" is the same as or different from the "single narrow groove". In claim 4, should "a space" be --the single narrow groove--? If not, why not?

- 3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4) **Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 9 lines 2-6) in view either Montagne (US 3763911) or Japan '705 (JP 11-342705), and optionally further in view of Kukimoto et al (US 5445201).**

The admitted prior art teaches the feature of the main groove widening during inflation. The feature of the main groove having a thin protruding rib and a single narrow groove is suggested by either Montagne or Japan '705. In Montagne, which teaches that each main groove can have one or two narrow grooves, the thin protruding rib reads on the protrusion 23 and the claimed single narrow groove reads on the narrow groove 24. In Japan '705, the thin protruding rib reads on the protrusion defining

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corner Z and the single small groove reads on the narrow groove 5. The motivation to use the claimed thin protruding rib and single narrow groove in the admitted prior art is preventing wear (see Montagne or Japan '705). The combination of the applied prior art is described in more detail below:

The admitted prior art discloses a pneumatic tire having a ribbed tire having grooves whose width is widened during inflation wherein both groove walls are inclined at 80 degrees with respect to the tread surface. The admitted prior art appears to teach that uneven wear occurs with this tire. A thin rib is not provided in the main groove. However, it would have been obvious to one of ordinary skill in the art to include an narrow outwardly inclined groove in the ribbed tread of the admitted prior art such that the inclined narrow groove is adjacent the main groove so as to define an outer thin rib in view of (a) Montagne's suggestion to include inclined narrow grooves 24 in a rib containing tread such that thin ribs (protruding elements 23) are formed in the main grooves *to prevent undesirable furrow wear* or (b) Japan '705's teaching to include an inclined narrow groove 5 in a ribbed tread such that a thin rib is formed in the main groove *to improve railway abrasion resistance (suppress wear)*.

As to Montage: Claim 1 fails to exclude two narrow grooves 24 for each main groove as disclosed by Montagne. The "groove wall near a shoulder is inclined outward in a tire width direction toward a groove bottom" reads on *the outer wall of the outer fine groove 24*. The "groove wall near the center is inclined outward in the tire width direction toward the groove bottom" reads on *the outer wall of the inner protruding element 23*. In claim 1, "near" is a relative term which fails to require a narrow groove /

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thin rib location not suggested by Montagne. The "single narrow groove" reads on *the outer narrow groove 24*. In any event: As to claim 1, it would have been obvious to include the claimed thin rib and single narrow groove in the ribbed tread of the admitted prior art in view of (a) Montagne's suggestion to include inclined narrow grooves 24 in a rib containing tread such that thin ribs (protruding elements 23) are formed in the main grooves *to prevent undesirable furrow wear*, (b) Montagne's suggestion that "one can within the scope of the invention optionally provide a protruding element on one side in the space between adjacent ribs and not the other" (emphasis added) and optionally (c) Kukimoto et al's suggestion that providing a main groove with a wear preventing means comprising a single narrow groove (figures 19a, 19b) is an alternative to providing a main groove with a wear preventing means comprising two narrow grooves (figures 18a, 18b). Hence, the admitted prior art and Montagne disclose main grooves having an inner groove wall and an outer groove wall defining a "v-shape". Montagne suggests improving the admitted prior art by associating a narrow groove with a main groove such that the width of the main ground contacting rib increases toward the tread surface to prevent wear. Montagne illustrates using two narrow grooves 24 for each main groove. However, Montagne describes using a single outer narrow groove 24 for each main groove instead of two narrow grooves 24 for each main groove. See col. 2 lines 59-62 of Montagne. Only the expected results (prevention of wear) are obtained.

With respect to Japan '705, claim 1 fails to exclude a narrow groove 4 in addition to narrow groove 5 as disclosed by Japan '705. The "groove wall near a shoulder is inclined outward in a tire width direction toward a groove bottom" reads on *the outer wall*

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of the narrow groove 5. The "groove wall near the center is inclined outward in the tire width direction toward the groove bottom" reads on *the outer wall of the narrow rib 3A*". The "single narrow groove" reads on the single narrow groove 5 illustrated in figure 1.

As to claim 3, the claimed height difference of 0-4 mm would have been obvious in view of Montagne's teaching to form thin ribs such that a "pointed top face" is slightly below the tread surface to prevent undesirable furrow wear.

As to claim 4, the limitation of the space width (width of single narrow groove) being 4 mm or smaller would have been obvious in view of either (a) Montagne's teaching to use a narrow width for the narrow grooves 24 or (b) Japan '705's teaching a narrow groove 5 width of 2-3 mm.

As to claim 5, it would have been obvious to make the main grooves of the admitted prior art straight since Kukimoto et al, also directed to preventing wear, suggests using a straight configuration for thin rib containing main grooves.

Remarks

5) Applicant's arguments with respect to claims 1 and 3-5 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 2-13-03 have been fully considered but they are not persuasive.

Applicant argues that none of the applied prior art teaches or suggests the features of claim 1. The examiner disagrees. The admitted prior art teaches the feature of the main groove widening during inflation. The feature of the main groove having a thin protruding rib and a single narrow groove is suggested by either Montagne or

Japan '705. In Montagne, which teaches that each main groove can have one or two narrow grooves, the thin protruding rib reads on the protrusion 23 and the claimed single narrow groove reads on the narrow groove 24. In Japan '705, the thin protruding rib reads on the protrusion defining corner Z and the single small groove reads on the narrow groove 5. The motivation to use the claimed thin protruding rib and single narrow groove in the admitted prior art is preventing wear (see Montagne or Japan '705).

Applicant comments that in the claimed invention, it is possible to effectively suppress generation of wear otherwise likely in the vicinity of or about the main groove. Suppression of wear is the expected result from the applied prior art. See Montagne's teachings regarding preventing wear or Japan '705's teachings regarding suppressing wear.

6) No claim allowed.

7) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
April 24, 2003


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
Au 1733 4-24-03